

# Copper Valley Telecom

- Serving 9600 square miles
- 4,000 access lines
- Density of less than .7 people per square mile
- 360 miles of fiber
- 2 major microwave pathways
  - 100 miles
  - 60 miles

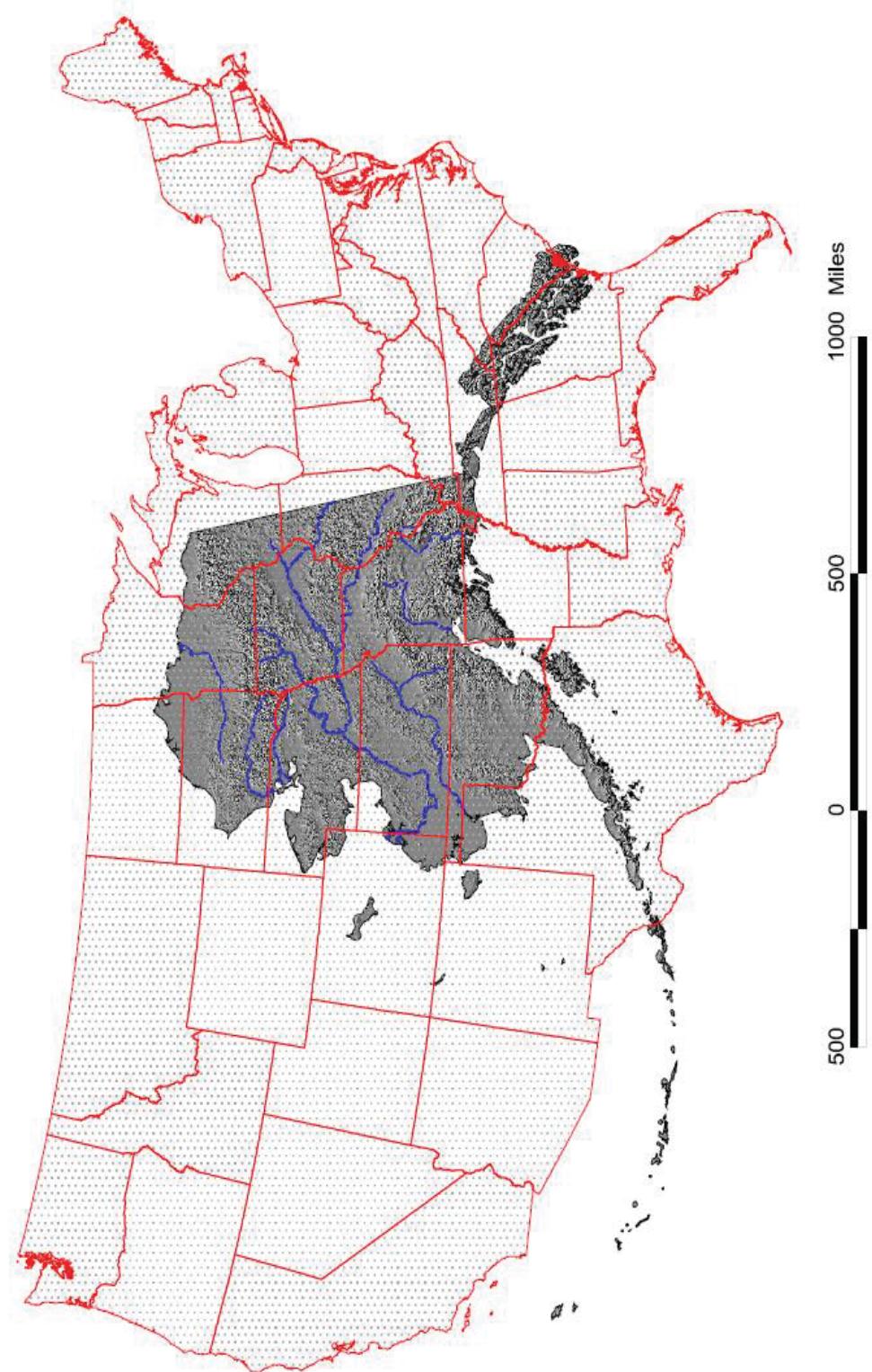


# Copper Valley Wireless

- Serving more than 15,000 square miles
- Population of 9,000
- Density of less than .6 people per square mile
- Less than 500 road miles in serving area
- More than 3,000 square miles of water (Prince William Sound)
- 39 cell sites 3G; 24 sites 4G LTE

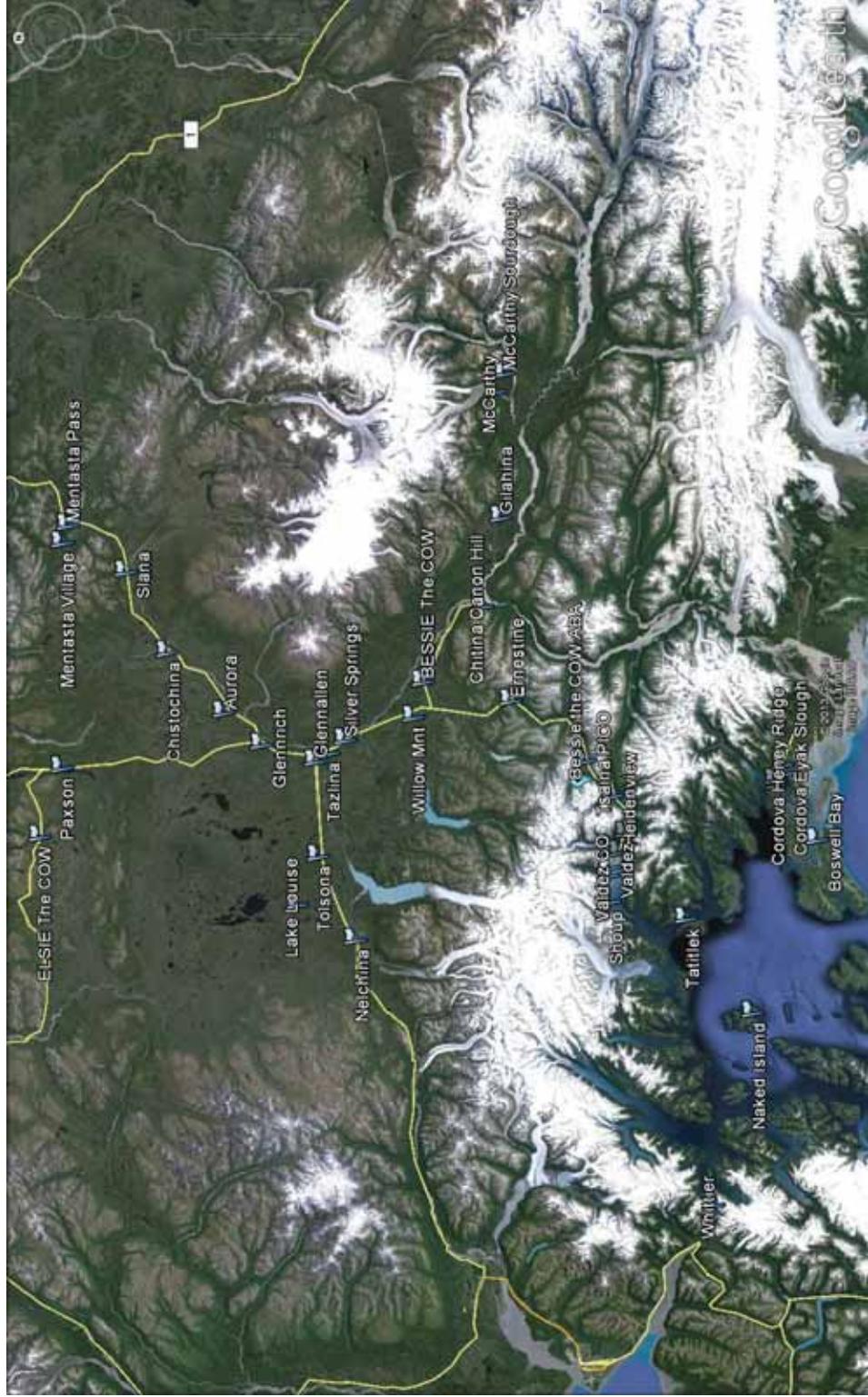


*Alaska Superimposed over the Continental United States*

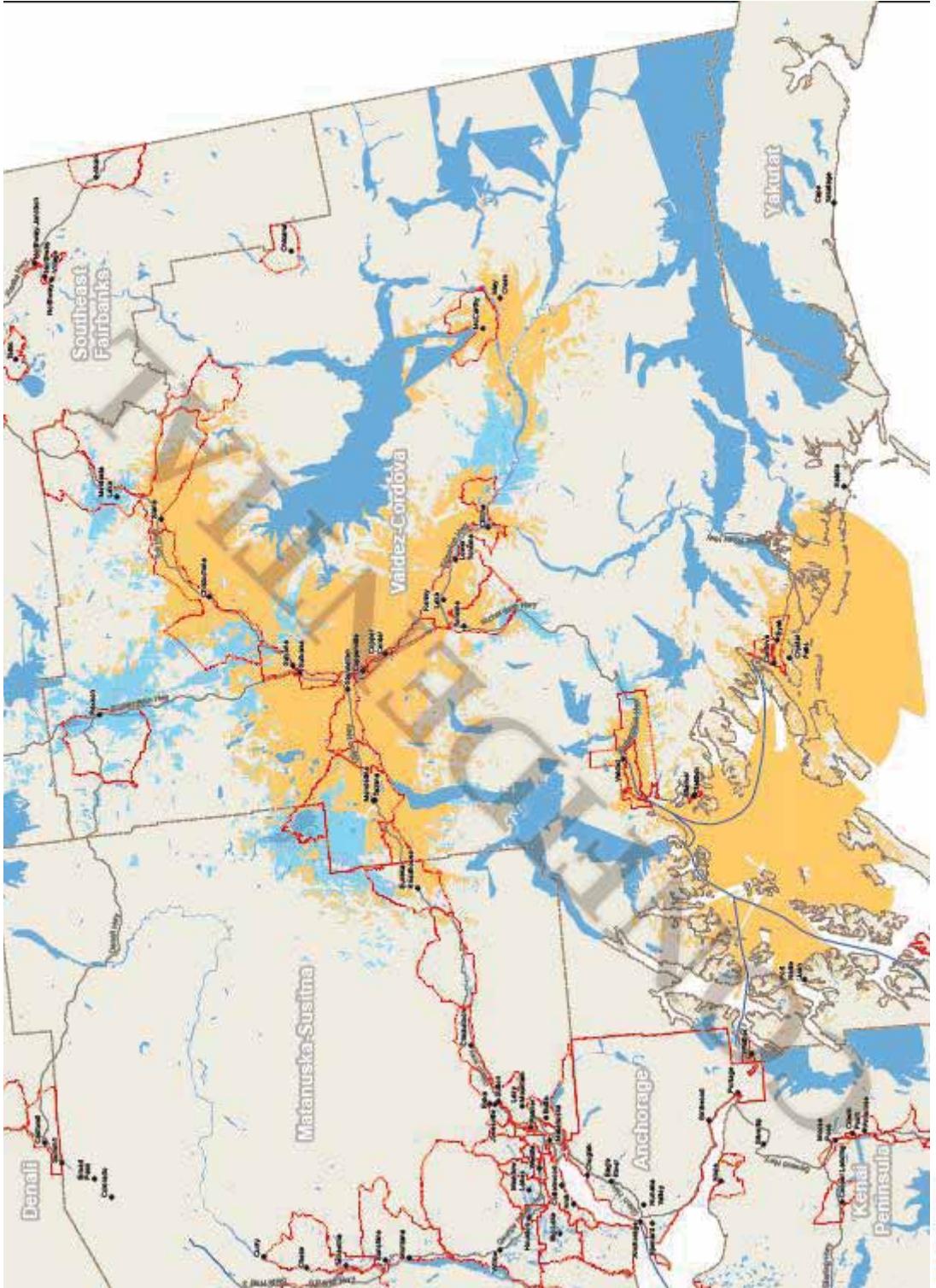




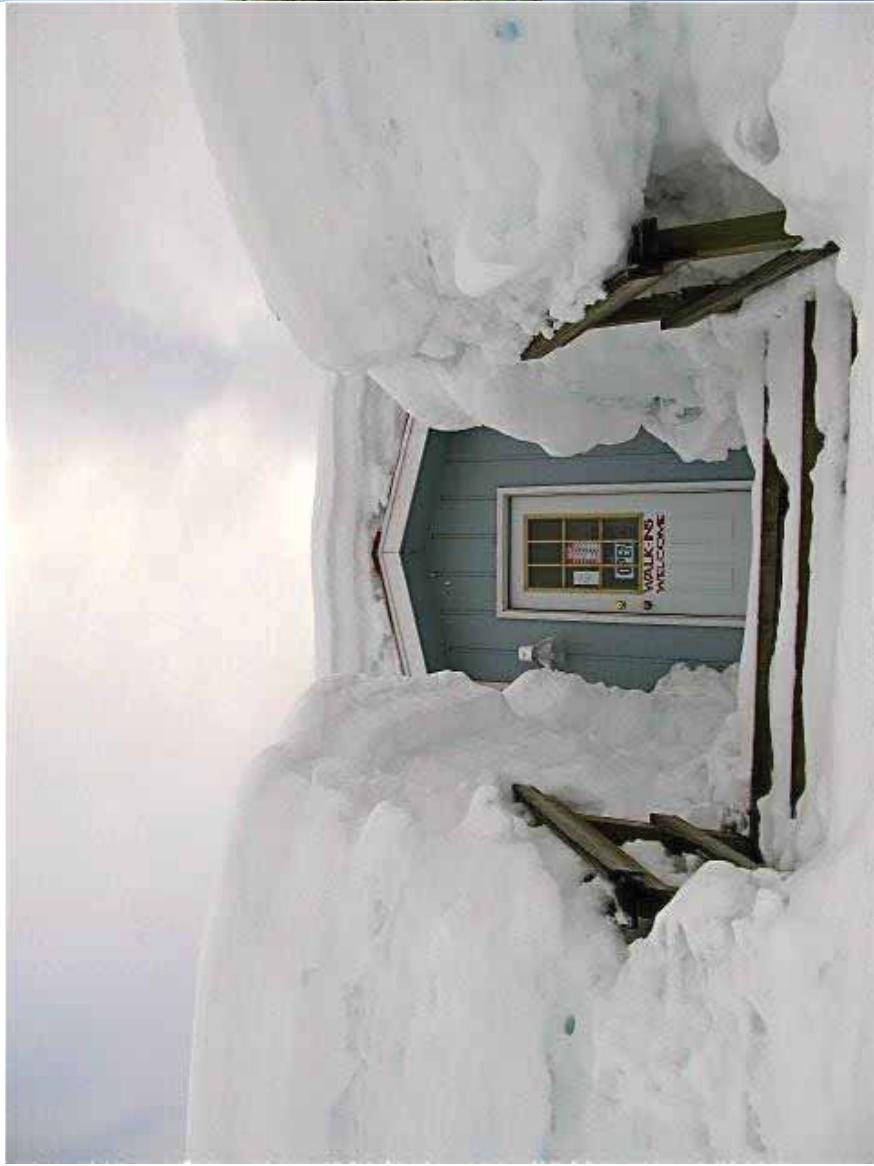
# Copper Valley Wireless Network

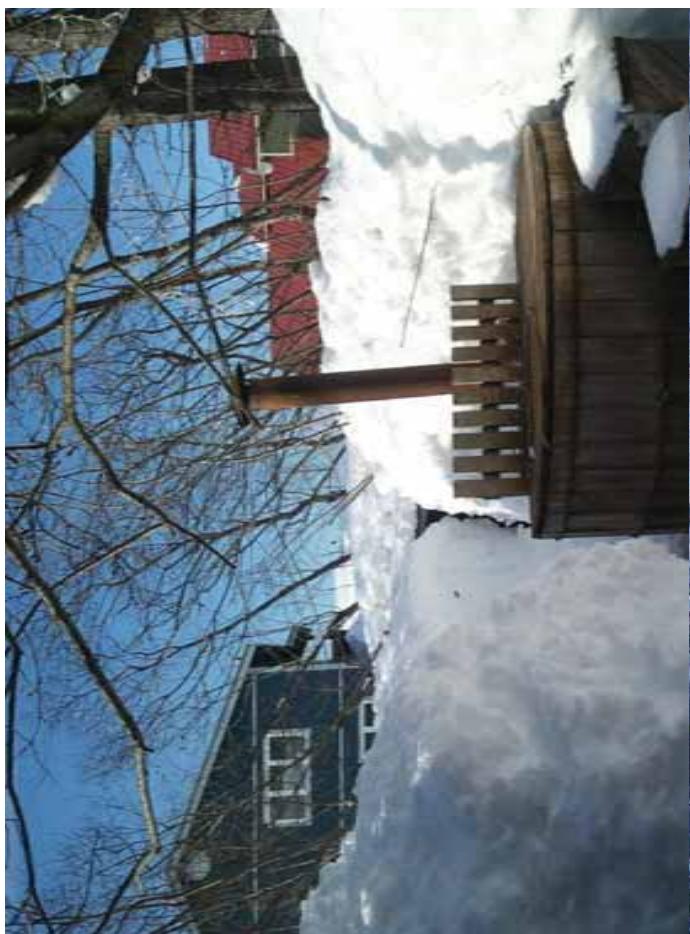


# 4G LTE Coverage



# Land of Extremes





# Responding to the Community

- In January 2014, major avalanches occurred in Keystone Canyon and further north along the Richardson Highway. As a result, highway access was blocked to Valdez and to rural areas between the avalanches. Copper Valley Telecom communications network in the affected areas remained in good condition. Buried fiber optic cable, which is the backbone of voice and data communications in the area was undamaged, even though the area was flooded. Our Internet landline, and wireless services in the Heiden View and Thompson Pass area were out for short periods of time during the weekend immediately following the incident, but were restored and operational for the remaining days that it took the Department of Transportation to clear the highway. Our services in Alpine Woods subdivision, which was under flash flood alerts for periods of time, operated normally during the event. Copper Valley worked with the City of Valdez to establish a cellular based remote camera at the western end of Keystone Canyon to provide real time monitoring of the Lower River for flood hazard.

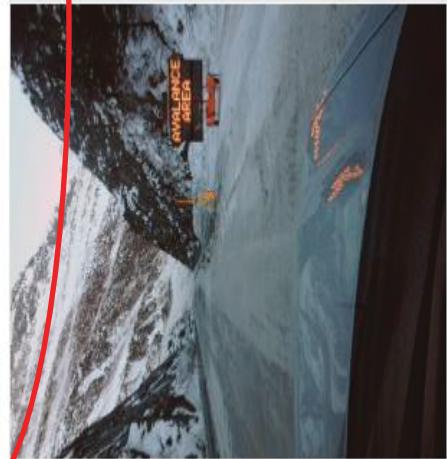
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## NATIONAL

In the News [Ukraine](#) [Flu](#) [Pussy Riot](#) [Hot Pockets](#) [Eliot Ness](#) [Scott Walker](#)



**Weeks after avalanches, lone road to Valdez opens**



Alaska Department of Transportation & Public Facilities/Associated Press - This Feb. 5, 2014 photo released by the Alaska Department of Transportation & Public Facilities shows Richardson Highway at Keystone Canyon, Valdez, Alaska. On Wednesday Feb. 5, 2014 two weeks after cascades of snow prevented vehicles from getting into the only road to Valdez has reopened. Crews finished cleaning away the remaining avalanche debris, and

By Associated Press, Published: February 5

VALDEZ, Alaska — Two weeks after cascades of snow prevented vehicles from getting into this city at the end of the trans-Alaska pipeline, the only road to Valdez has reopened.

Crews finished clearing away the remaining avalanche debris, and there was no damage to Richardson Highway, the Anchorage Daily News reported (<http://is.gd/nvV4Mr>).



# Bus with Ski Teams Collides with Truck

DEVIN KELLY  
dkelly@adn.com

Staff

A charter bus carrying Kenai-area students to a cross-country ski meet collided with a state Department of Transportation truck on the Richardson Highway on Friday morning, seriously injuring the bus driver, officials said. Vernon Brown, 72, of Kenai was eventually flown to Providence Alaska Medical Center in Anchorage to be treated for his injuries, said Beth Ipsen, Alaska State Troopers spokeswoman. The crash was reported to authorities at 11:44 a.m. on a straight stretch of highway about two miles from the start of Thompson Pass. Snow was blowing, creating visibility problems, Ipsen said.

The bus, chartered by the Kenai Peninsula Borough School District from the Kenai-based Unique Bus Charters company, was following the large DOT truck, Ipsen said. The truck, similar to a snowplow truck, was towing a trailer with a bulldozer on it, troopers as 60-year-old James Woodhouse of Valdez, was taking the bulldozer from one maintenance station to another, Woodrow said. Ipsen said the DOT truck had slowed to make a left turn onto a pullout on the other side of the highway.

"Due to the blowing snow, the driver of the school bus didn't see the turn signal and didn't see the (truck) slowing down, and rear-ended it," Ipsen said. The charter bus went into a ditch, pinning and seriously injuring Brown, Ipsen said. Brown has worked for the charter company for more than 15 years, said Margaret Baxter, a spokeswoman for Unique Bus Charters. He also works as a bus driver for the Kenai Peninsula Borough School District and has a good driving record, she said. An ambulance brought Brown to a Valdez hospital, from which he was later transported to Anchorage. He is being treated for serious but non-life-threatening injuries, Ipsen said.

Baxter said this is the first major driving accident in the charter company's history. The bus was carrying 49 people -- 43 students and 6 adults -- from the Kenai Peninsula to Valdez for the ski meet, said Pegge Erkenoff, a spokeswoman for the Kenai school district. That count included 28 members of the Kenai Central High School cross-country ski team and 15 from the Skyview High School team, as well as coaches from both teams, Erkenoff said. One student was thrown against the seat in front of him and was transported by ambulance to the hospital with minor injuries, along with the DOT driver, who said he had back pain, Ipsen said.

The rest of the students were picked up by Valdez City School District buses and taken to be evaluated by a triage team at Hermon Hutchens Elementary School in Valdez, Erkenoff said. After that, several students were taken to Providence Valdez Medical Center for further evaluation, she said. Mitch Michaud, chair of the Kenai Central Nordic Ski Club booster club, said two of his children are members of the Kenai Central High School ski team and were on board the bus when the crash happened.

Despite spotty reception, he reached his 16-year-old daughter Madeleine on her cellphone after the crash. She said that when the bus came to a sudden stop, "that was really scary like slowing down really fast," Michaud said. "A lot of kids got bounced," he said.

"I think she's just glad that nothing really worse happened," Michaud said.

Madeleine told him she hurt her shoulder but was otherwise OK. Michaud said he was comforted that the students were aboard a charter bus rather than a standard school bus and that Unique Charters typically transports teams to compete in Fairbanks. It's uncommon for Kenai schools to travel the roughly 450 miles to Valdez. The teams usually plan to make the trip every four years, Michaud said.

The bus left Thursday, and the students stayed in Palmer on Thursday night before heading out for Valdez the next day. The students' first race of the Valdez Invitational was supposed to start at 3:30 p.m. on Friday, with races continuing Saturday, Michaud said. But in a statement Friday evening, the school district said that the teams will not compete in the Valdez Invitational at all this weekend.

"Unique Charters is sending a replacement bus for the teams, which plans to leave Valdez and drive back to the central peninsula midday," the statement said.

By about 6:50 p.m. Friday, most of the students who had gone to the hospital had been treated and released, and were eating spaghetti dinner, Erkenoff said in an email. She said a few were still waiting at the hospital to be evaluated. "I thank all of the staff from Valdez City Schools, the Valdez Emergency Services, Valdez Police personnel at the Valdez Hospital, and the Alaska State Troopers for their immediate and professional response to today's accident," Steve Atwater, superintendent of the Kenai school district, said in a statement. "The location of the accident made the response difficult, we are thankful that these agencies are so well trained."

He also thanked local families who volunteered to bring food to the students and opened their homes to parents who came on the trip.

Reach Devin Kelly at dkelly@adn.com or 257-4314.



# Deploy C.O.W. at Thompson Pass DOT for the Spring Ski Season



In 2010, three back country skiers were caught in an avalanche near Thompson Pass. Two of the skiers searched for and found the third. She was completely buried and in grave condition. After extracting her from the snow, one skier used her Copper Valley cell phone to call a ski tour operator located miles away who was able to dispatch a rescue helicopter. The victim was flown to the Valdez hospital. It was relayed to us that without the quick rescue, made possible by the use of Copper Valley's cell service, this incident would likely have resulted in death.

# Dave Bruss's life saved due to 911 call placed from Cannon Hill site in Chitina, 7/5/2013



The image displays three separate screenshots of a document from Copper Valley Wireless (CVW) addressed to the Federal Communications Commission (FCC). The top screenshot shows the header and the beginning of the letter, which discusses the importance of USF support for CVW's cell site in Chitina, Alaska. The middle screenshot continues the narrative, emphasizing the critical nature of the service provided by the site. The bottom screenshot concludes the letter, reiterating the request for USF funding and expressing concern about potential changes in funding rules.

August 2013  
To Whom It May Concern:  
Subject: Universal Service Fund Support for the Chitina, Alaska Cell Site  
Dear Sir or Madam:

This letter is to express our appreciation for the support provided by the Universal Service Fund (USF) to our company, Copper Valley Wireless (CVW), for the Chitina, Alaska cell site. The Chitina cell site is located in a rural area of Alaska, approximately 15 miles from the nearest town. The site is critical to the local community, providing essential communication services to residents and visitors. The site has been in operation since 2008 and has been a valuable asset to the community.

The Chitina cell site is part of a larger network of CVW cell sites in the region. The network provides coverage to areas where traditional wired telephone service is not available. The Chitina site is particularly important because it is the only cell site in the area that provides reliable service. The site is located on a hillside overlooking the Chitina River, and it is a key part of the local economy, providing jobs and supporting tourism.

We are grateful for the support provided by the USF for the Chitina cell site. The site has been a valuable asset to the community, providing essential communication services to residents and visitors. The site has been in operation since 2008 and has been a valuable asset to the community.

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## Copper Valley Wireless Says USF Support Helps Save Lives

Copper Valley Wireless filed a [letter](#) on August 29, 2013, to detail how its USF-supported cell site in remote Alaska assisted in a recent emergency situation. CVW said without support from universal service funding, this particular cell site would not have been deployed, and very likely, human life would have been lost. CVW said the FCC must work to adopt rules that ensure the continued funding to rural wireless carriers that operate the only wireless facilities in these remote areas.

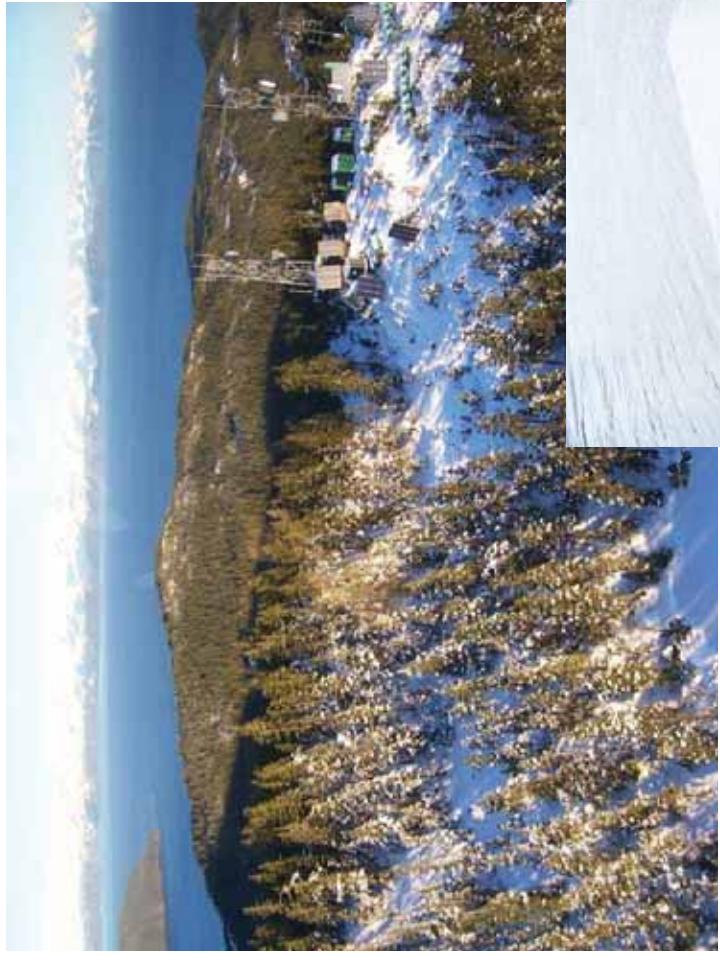


Copper Valley Technician uses CVW Canon Hill cell site to call for rescue after plane crashes on a service call to McCarthy, Alaska



Copper Valley Wireless files in 2014

# Naked Island Site

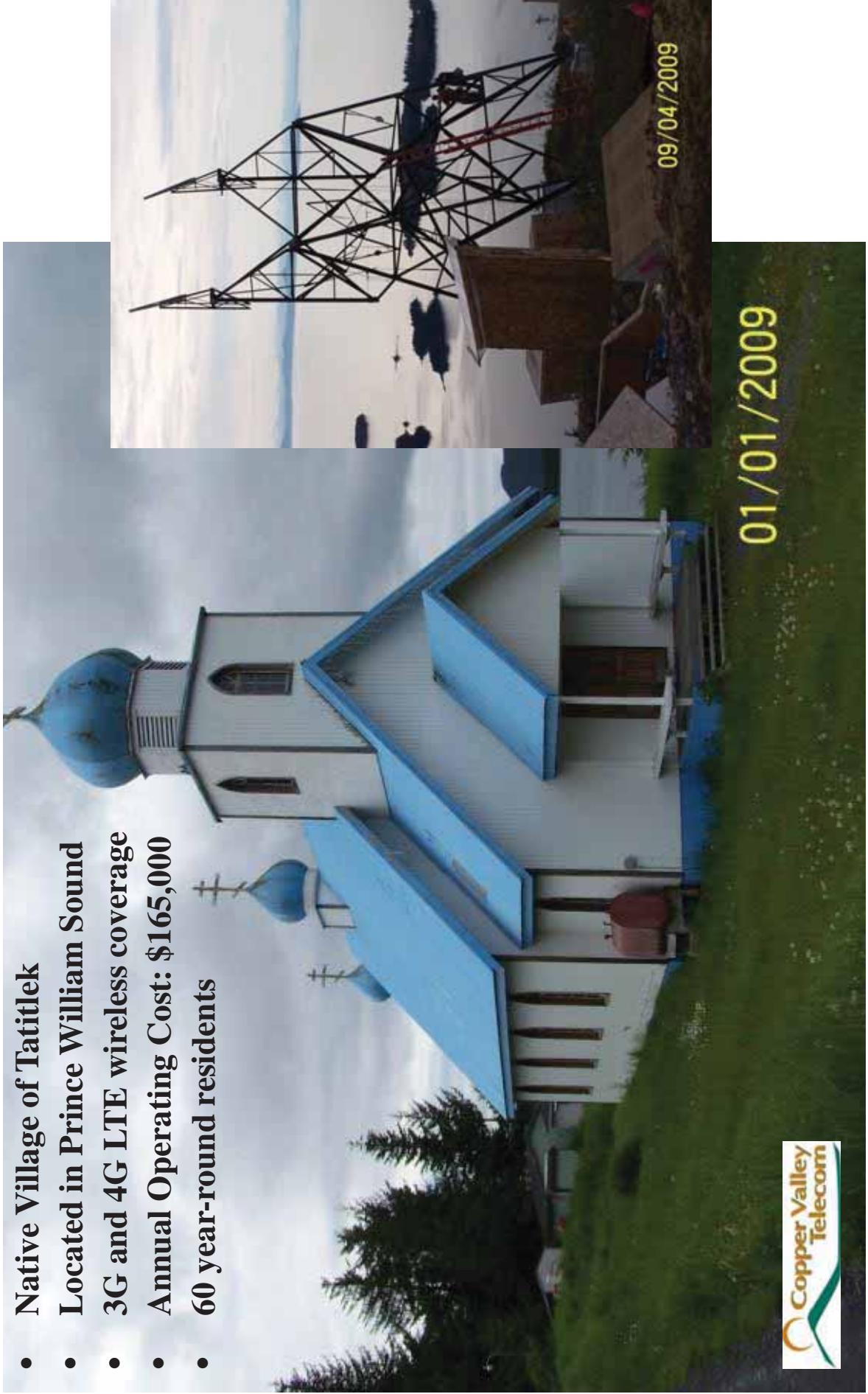


- Located in Prince William Sound
- 3G and 4G LTE Data
- Oil Tanker traffic
- Alaska Marine Highway (ferry)
- Commercial fishing
- Recreational boating
- Annual Operating Cost: \$334,000
- Population: 0

09/04/2009

# Village of Tatitlek Site

- Native Village of Tatitlek
- Located in Prince William Sound
- 3G and 4G LTE wireless coverage
- Annual Operating Cost: \$165,000
- 60 year-round residents



# McCarthy-Kennecott Site

- Located in Wrangell-St. Elias National Park
- 3G and 4G LTE wireless coverage
- Annual Operating Cost: \$238,900
- 45 year-round residents
- 20,000 visitors annually



# Slana Fiber Extension

- Located 70 miles from Glennallen
- Four miles of fiber, copper drops, one electronics cabinet
- Cost of installation: \$680,000
- Anticipated customers: 25



# Contact Information

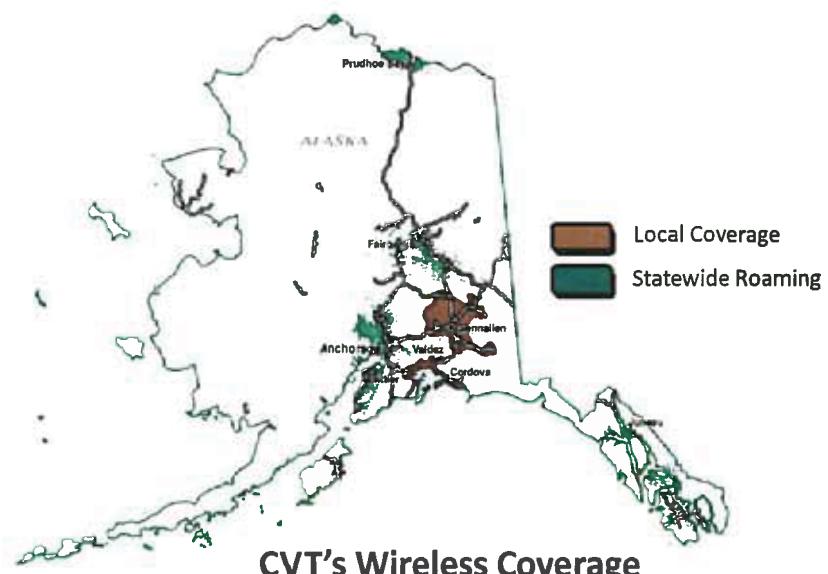
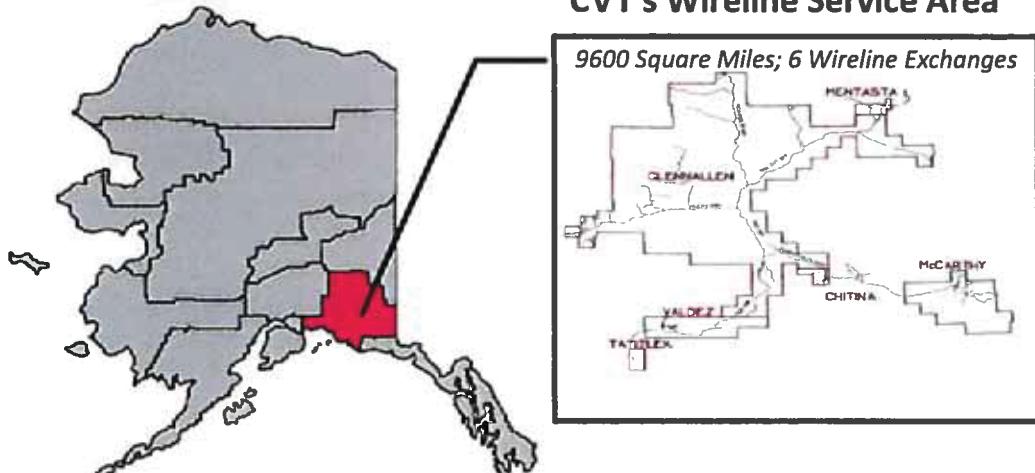
Dave Dengel, CEO  
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P.O. Box 337  
Valdez, Alaska 99686  
**907-835-7701**  
**ddengel@cvtc.org**

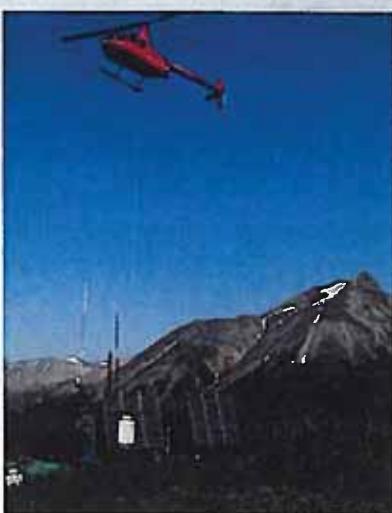




Telephone | Long Distance | Internet | Wireless

## CVT's Wireline Service Area





## Copper Valley Telecom: A Snapshot of a Rural Carrier

### Cooperative since 1961

- Copper Valley Telephone Cooperative
- Copper Valley Wireless
- Copper Valley Long Distance
- Copper Valley Solutions

### 9,600 square miles within Wireline Service Area

- 6 exchanges
- 20 communities
- Over 4,000 access lines
- Rural: 0.7 people/square mile

### 15,000 square miles within wireless network

- 30 cell sites
- 3G CDMA network
- 4G LTE
- Rural: 0.6 people /square mile

### Over 360 miles of fiber cable

### 2 major microwave paths

- Valdez to Cordova (approx. 100 miles)
- Chitina to McCarthy (approx. 60 miles)

### Broadband serves over 1,800 customers

## Land of Extremes

- Temperatures from +80F to -50F
- Average annual snowfall in Valdez: 325 inches
- 2 to 4 hours drive time between exchanges
- Remote sites accessible only by helicopter and fixed wing aircraft

## CVT Serves Key Rural Stakeholders

- City of Valdez– terminus of the Trans Alaska Oil Pipeline System (TAPS)
- Oil tankers transporting North Slope oil to market
- 8 federally recognized Native tribal organizations
- Copper River Basin
- 7,074 Total Population
  - 30% Alaska Native
  - 6.3% of households below poverty level
  - 63% of households in one exchange below poverty level
- Wrangell-St. Elias National Park(largest park in U.S.)
- Prince William Sound & its robust fishing industry
- Alaska Marine Highway
- Tourism businesses

## Full Service Communications

- Broadband up to 18MB/1MB
- Landline
- Long Distance
- Wireless Data
- Wireless Voice & Text Messaging
- Ethernet, T1, DS3, OC3 Dedicated Circuits

**4G LTE  
IS HERE!**



## Copper Valley Telecom Deploys State of the Art Telecommunications Technology to Best Serve Our Customers

### Wireline

#### Network Components

- Fiber and microwave infrastructure
- Soft switches
- Fiber to major institutions including hospitals, schools, and government
- Shorter loops
  - Fiber to the node
  - Field trial fiber to the home
- Broadband reach:
  - 97% 3 mbps
  - 90% 10 mbps
  - 55% 15-18 mbps
- Video caching to maximize efficiency
- Redundant pathways

### E911 Provider



### Prince William Sound Microwave

- Terrestrial connectivity to Tatitlek, a remote Alaska Native village in Prince William Sound
- Provides high speed Broadband to community
- Supports 4G LTE

### Wireless

#### Network Components

- Fiber and microwave foundation
- 30 cell sites
- 3G CDMA
- 4G LTE
- Fixed Wireless for hard to reach locations
- Nationwide roaming partners for voice & data
- Verizon LTE in Rural America (LRA) program participant

#### Cellular on Wheels (COW)

These mobile towers are available for fast emergency deployment for disasters such as oil spills and earthquakes.

The units are routinely deployed during winter on Thompson Pass, a busy ski and snowmobiling area, for increased public safety.

The units are routinely deployed during summer to Denali Highway, a busy fishing and boating area, for increased public safety.

### Alternative Energy

#### Solar

CVT utilizes solar energy at 6 cell sites and 3 ancillary sites. As much as 50% of annual energy required to operate some sites is solar power.

#### Wind

CVT is installing a wind turbine that will generate up to 43% of its annual energy requirements at one site and is testing the viability of wind at a second site.

## Customer Care

Copper Valley provides affordable rates and excellent, accessible customer service and technical support.

- ◎ Three stores
- ◎ Service visits to remote communities
- ◎ Website
- ◎ Toll Free Number
- ◎ 24/7 Technical Support
- ◎ Educational Sessions
- ◎ Tiered pricing for all lifestyles and budgets
- ◎ Lifeline and LinkUp discounts
- ◎ Accessible to people with disabilities



### *CVT wireless network improves safety, saves lives*

In 2010, three back country skiers were caught in an avalanche near Thompson Pass. Two of the skiers searched for and found the third. She was completely buried and in grave condition. After extracting her from the snow, one skier used her Copper Valley cell phone to call a ski tour operator located miles away who was able to dispatch a rescue helicopter. The victim was flown to the Valdez hospital. It was relayed to us that without the quick rescue, made possible by the use of Copper Valley's cell service, this incident would likely have resulted in death.

In 2013, a fisherman capsized on the frigid (40 degree) Copper River. The strong current swept him down river four miles for approximately 20 minutes. During his odyssey, he fought to remain above water, losing strength with each passing minute. Finally, a charter boat captain who had been called by authorities via cell phone to assist with the search saw the fisherman's arm reaching out of the water. The captain was able to rescue the man and save his life. Later, the fisherman stated to news reporters that he was "grateful to his family friends who carried cell phones and got the search launched."

*"The technician that came out [to install service] was great. He explained everything to us."*  
Copper Center, AK

*"CVT is my favorite telephone company. They are great!"* Valdez, AK

*"They aren't only nice people, they are competitive. I am very happy."* Glennallen, AK

*"The customer service representative that assisted us was very helpful. She just made it all so easy."* McCarthy, AK

## Contact Information

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